

The New York Times

THE WEATHER

Becoming partly sunny, mild today; cloudy, mild tonight and tomorrow. Temp. range: today 52-38; Saturday 40-37. Full U.S. report on Page 83.

SECTION ONE

© 1971 The New York Times Company.

NEW YORK, SUNDAY, MARCH 14, 1971

75¢ beyond 50-mile zone from New York City, except Long Island. Higher in air delivery cities.

50 CENTS

SAIGON'S FORCES

FISCAL METHODS

to avoid its
sition long
to dig at
Tchepone,
mortars
craft bat-
ent Amer-
sisting the
an attack.
000 enemy
c west of
government
oday. The
at press
uth Vietna-
to avoid a
stated town
Minh Trail.
esman said,
ese are de-
become "a
the enemy,
ntage of the
bility to keep
of segments
network.
south of the
s considered
e it over-
and because
the enemy's
ions of anti-
guns have
4, Column 1

General Greenleaf noted that despite these changes, waiting
Continued on Page 17, Column 1

Computer to Save Millions In Film Editing Due Soon

By JACK GOULD

A major technological advance in Hollywood's methods of producing films and tapes for television and motion pictures is only weeks away with the commercial introduction of an electronic computerized system for editing visual material.

Savings of millions of dollars are envisioned in the system, which can store scenes of a drama photographed in seemingly chaotic disorder. Upon demand, the system produces a finished product in the logical narrative sequence of a director's choice.

Untouched by Human Hand

The human hand never touches either the tapes or film during the editing, and the individual in creative control can choose between limitless ver-

arbitrarily, to deal with almost every question of social and political conduct, then 100,000 of the world's most efficient police would accomplish noth-

sions of a given scene, repeatedly trying first one and then another and making deletions or insertions until he is esthetically satisfied.

The process, for which orders have already been accepted and may be in initial use by early summer, involves a sophisticated fusion of tape recorders,

Continued on Page 68, Column 3

Nixon Depicts His Wife As Strong and Sensitive

By United Press International

WASHINGTON, March 13 —President Nixon says his wife, Pat, who celebrates her 59th birthday Tuesday, is a woman "of great strength of character" and superb sensitivity whose "passion for privacy" prevents her from enjoying all aspects of her role as First Lady.

He also describes her, in Navy lingo, as a "sundowner"—a strict disciplinarian—with her two daughters, and as a woman who likes to keep the White House "ship-shape."

She has strong views but agrees with her husband that they cannot speak with "two voices" when they disagree, Mr. Nixon says.

"A walk on the beach . . . with her hair flying . . . and no photographers." That, he says, would be his birthday wish for her.

The President spoke of his

An article on the President's political comments, Page 26

that "the bail system, which treats pre-trial release as a privilege to be bought or earned, and which incarcerates persons in crowded, large institutions for long periods before adjudication of guilt or innocence, is perhaps the most nefarious element in the entire criminal justice system."

"Its practices add up to institutionalized injustice," the report said.

In addition to criticizing the present effort, the council offered a plan for the future that it said might eventually lead to less crime. But no hope was raised that this goal would be achieved in the next year or two.

"This plan is not intended to provide a quick solace or support for those who believe in or are seeking a quick solution

Continued on Page 70, Column 1

on Wednesday after Controller Abraham D. Beame said he would shift \$25-million of this year's school costs into next year's budget.

Nyquist Study Under Way

In addition to the Senate inquiry, an investigation ordered by State Education Commissioner Ewald B. Nyquist is under way to determine whether the board violated Section 1704 of the State Education Law by spending its \$1.5-billion appropriation at a rate that would exhaust the funds before the end of the fiscal year on June 30.

After taking testimony yesterday from several school and city officials, the 11-member Senate Committee to Investigate the Board of Education briefed newsmen on the substance of a preliminary report to be delivered to the full Senate in Albany tomorrow.

Speaking for the committee members at his side, Senator Thomas Laverne, a Rochester

Continued on Page 56, Column 4

Today's Sections

Section 1 (2 Parts)	News
Section 2 Drama, Movies, TV, Radio	
Section 3	Financial and Business
Section 4	Review of the Week
Section 5	Sports
Section 6	Magazine
(Part 2) Children's Fashion	
Section 7	Book Review
Section 8	*Real Estate
Section 9	*Employment Adver.
Section 10	*Resorts & T
Section 11	*Adver.
Section 12	Gard.

*Included in all copies distributed in New York City and its suburban area.

Index to Subjects

	Section	Page
Architecture	2	16
Art	2	19-21
Boating	5	11-14
Bridge	6	74
Chess	2	29
Coins	2	28-29
Dance	2	5
Editorial	4	12
Education	4	9
Fashions	6	60
Food	6	68
Home Fashions	6	70
Letters to the Editor	4	12
Music	2	12-14
News Summary & Index	1	83
Obituaries	1	74-75
Op-Ed	4	13
Photography	2	27
Puzzles	6	77
Records	2	22-26
Science	4	7
Society	1	76-82
Stamps	2	28-29
Transportation	1	72
Weather	1	83

Kent, Artist, Is Dead; Famed Left-Wing Causes

Special to The New York Times

N. Y., March 13 —Robert R. Kent, whose paintings and illustrations have earned him a national reputation, died last night at his home in Champlain, N. Y., after a long illness.

He received a Lenin Peace Prize in 1967. The funeral service will be private. A memorial service in New York will be announced later.

Man of Multiple Skills

By ALDEN WHITMAN

At various (and frequently simultaneous) periods of his long life the protean Rockwell Kent was an architect, painter, illustrator, lithographer, xylographer, cartoonist, advertising artist, carpenter, dairy farmer, explorer, trade union leader and political controversialist. "He is so multiple a person as to be multifarious," Louis Un-

Continued on Page 74, Column 1

NEW WEEKLY BIOGRAPHICAL SERVICE. The New York Times Biographical Service. Write: The New York Times, Library Services, Box FP-480, 229 West 43d Street, New York, N. Y. 10036. ADVT.

JOBS IN THE MEDICAL FIELD. Openings for professional and non-professional workers appear today in The New York Times. See Section 4 and 9. (Section 9 is distributed in New York and vicinity.)—Advt.

Computer to Save Millions in Film Editing Due Soon

Continued From Page 1, Col. 6

computer memory banks and magnetic disks that promises to bypass the time-consuming and costly laboratory steps that traditionally have constituted one of Hollywood's most sizable production costs. The system already has an informal designation: RAVE (Random Access Video Editing).

The process was conceived by the Columbia Broadcasting System television network, of which Joseph A. Flaherty is general manager in charge of engineering and development. It was later refined in collaboration with the Memorex Corporation of Sunnyvale, Calif. The two companies have established CMX, Inc., to manufacture and market the system. Co-chairmen of CMX are Edward L. Saxe, president of the C.B.S. Services Division, and John Del Favero, executive vice president of Memorex.

Two major Hollywood studio heads have shown interest in acquisition of the system, and representatives of foreign broadcasting companies have been attending private showings in New York.

Cuts in Time and Cost

In layman's terms, the heart of the CMX system is its ability to collect and file away all the separate "takes" of a film and make them instantly available for an editor, sitting at a console of two screens, to put in coherent order. This working print or tape is immediately made into a running whole while at the same time all the trims and cuts are preserved for later consideration.

To make a cut in a tape today averages about 20 minutes or so; under the CMX system,

the process is done in two or three minutes without tying up costly tape-recording machines. CMX estimates that the savings might be up to \$5,000 for an individual installment in a TV series, which could make amortization of the system's cost of \$250,000 a complete unit very fast.

Operation of the system borders on the eerie. The console operator can order up whatever he wishes to see. He presses no buttons or pulls any switches. Rather, he uses a pencil light that directs the system to offer a choice of "menus," i.e., whether he wants the system to record, play back or edit.

If the director wants to see Scene 1 of Act 2, he presses his pencil light, actually a photoelectric cell, against those words on the face of the screen. Instantly there is a still picture denoting that the sequence is ready for study. The light is then pressed against the word "run" and the scene starts.

With the same pencil light the operator can order the system to stop. He can thereupon order a new starting point and new ending. Thereafter he can review the edited scenes and, if he wishes, compare them with the original.

Immediate Review

Since far more film footage is exposed than used in a TV film or a motion picture, the system can cut the manpower and machinery now used in editing. With the electronic pencil, for instance, a dissolve, or the fading out of a scene, can be fixed for a precise number of frames and the results immediately reviewed. To have the same process done in a film laboratory, it was said, could take a week.

The original pictures, the

cuts and the final versions are all stored on banks of plastic-coated disks across which recording and reproduction heads pass in fractions of a second. Yet the computerized bank can retrieve from dozens of such disks the precise material in the order wanted.

TV tapes are coded magnetically so that a particular frame of a picture can be electronically detected. But such reference markers are not visible to the human eye. Motion picture film, on the other hand, is edged with visible coded numbers for each frame. Mr. Saxe said the computer could easily transfer one reference system to the other.

For a feature film, the computer could read out on paper the prescribed order of frame numbers for an entire production. A technician then could cut the film according to instructions without recourse to the present methods of winding and rewinding.

Feature films normally are shot in small takes with a single camera for maximum precision in lighting and composition effects. Many TV shows, on the other hand, are shot with two or three electronic cameras, and the director must make his artistic decision as the show progresses. With the CMX method, a single electronic camera approach to TV, with consequent savings in personnel, is deemed likely since

a master tape could be quickly assembled from individual parts.

Rising Costs Are Noted

Mr. Saxe said he believed the CMX method would provide the economic savings that both TV and the film industry must achieve in the face of rising costs. Yet he noted that in the long run the method should also increase employment.

Film studios normally have a line of bank credit at high interest charges, which must be paid until a motion picture is ready for release. Any reduction in the editing time following actual production would free that credit for another venture, Mr. Saxe observed. By the same token, he said, faster editing would make it possible for TV to work on a tighter schedule between production of a film and its actual presentation.

Mr. Saxe said that the CMX joint venture was part of Columbia's plan to diversify in the field of communications. He said that industrial uses of the system ultimately might exceed revenues from show business. He noted that an unlimited number of fingerprints and photographs of wanted criminals could be centrally stored. He said that in effect CMX added visual material, either moving or still, to the numerals and letters now predominating in esoteric information banks.

Computer to Save Millions in Film Editing Due Soon

Continued From Page 1, Col. 6.

computer memory banks and magnetic disks that promises to bypass the time-consuming and costly laboratory steps that traditionally have constituted one of Hollywood's most-sizeable production costs. The system already has a name: RAVE (Random Access Video Editing).

The process was conceived by the Columbia Broadcasting System television network, of which Joseph A. Flaherty is general manager in charge of engineering and development. It was later refined in collaboration with the Memorex Corporation of Sunnyvale, Calif. The two companies have established CMX, Inc., to manufacture and market the system. Co-chairmen of CMX are Edward L. Saxe, president of the C.B.S. Services Division, and John Del Favero, executive vice president of Memorex.

Two major Hollywood studio heads have shown interest in acquisition of the system, and representatives of foreign broadcasting companies have been attending private showings in New York.

In layman's terms, the heart of the CMX system is its ability to collect and file away all the separate "takes" of a film and make them instantly available for an editor, sitting at a console of two screens, to put in coherent order. This working print or tape is immediately made into a running whole while at the same time all the trims and cuts are preserved for later consideration.

Cuts in Time and Cost

To make a cut in a tape today averages about 20 minutes or so; under the CMX system, the process is done in two or

three minutes without tying up costly tape-recording machines. CMX estimates that the savings might be up to \$5,000 for an individual installment in a TV series, which could make amortization of the system's cost of \$250,000 a complete unit very fast.

Operation of the system borders on the eerie. The console operator can order up whatever he wishes to see. He presses no buttons or pulls any switches. Rather, he uses a pencil light that directs the system to offer a choice of "menus," i.e., whether he wants the system to record, play back or edit.

If the director wants to see Scene 1 of Act 2, he presses his pencil light, actually a photoelectric cell, against those words on the face of the screen. Instantly there is a still picture denoting that the sequence is ready for study. The light is then pressed against the word "run" and the scene starts.

With the same pencil light the operator can order the system to stop. He can thereupon order a new starting point and new ending. Thereafter he can review the edited scenes and, if he wishes, compare it with the original.

Immediate Review

Since far more film footage is exposed than used in a TV film or a motion picture, the system can cut the manpower and machinery now used in editing. With the electronic pencil, for instance, a dissolve, or the fading out of a scene, can be fixed for a precise number of frames and the results immediately reviewed. To have the same process done in a film laboratory, it was said, could take a week.

The original pictures, the

cuts and the final versions are all stored on banks of plastic-coated disks across which recording and reproduction heads pass in fractions of a second. Yet the computerized bank can retrieve from dozens of such disks the precise material in the order wanted.

TV tapes are coded magnetically so that a particular frame of a picture can be electronically detected. But such reference markers are not visible to the human eye. Motion picture film, on the other hand, is edged with visible coded numbers for each frame. Mr. Saxe said the computer could easily transfer one reference system to the other.

For a feature film, the computer could read out on paper the prescribed order of frame numbers for an entire production. A technician then could cut the film according to instructions without recourse to the present methods of winding and rewinding.

Feature films normally are shot in small takes with a single camera for maximum precision in lighting and composition effects. Many TV shows, on the other hand, are shot with two or three electronic cameras, and the director must make his artistic decision as the show progresses. With the CMX method, a single electronic camera approach to TV, with consequent savings in personnel, is deemed likely since

a master tape could be quickly assembled from individual parts.

Rising Costs Are Noted

Mr. Saxe said he believed the CMX method would provide the economic savings that both TV and the film industry must achieve in the face of rising costs. Yet he noted that in the long run the method should also increase employment.

Film studios normally have a line of bank credit at high interest charges, which must be paid until a motion picture is ready for release. Any reduction in the editing time following actual production would free that credit, for another venture, Mr. Saxe observed. By the same token, he said, faster editing would make it possible for TV to work on a tighter schedule between production of a film and its actual presentation.

Mr. Saxe said that the CMX joint venture was part of Columbia's plan to diversify in the field of communications. He said that industrial uses of the system ultimately might exceed revenues from show business. He noted that an unlimited number of fingerprints and photographs of wanted criminals could be centrally stored. He said that in effect CMX added visual material, either moving or still, to the numerals and letters now predominating in esoteric information banks.

Jury Will Consider Indictments for 57 In Fight Fatal to 5

Special to The New York Times

CLEVELAND, March 13—The Cuyahoga County grand jury will meet Monday to hear evidence and consider indictments against 57 persons charged with the murders of five persons in a battle between two motorcycle gangs here last Saturday night.

Cleveland policemen on Tuesday charged the 57 suspects

**EASTER
WEEK
IN
PALM BEACH
AT THE
BREAKERS**

furniture fair



FROM

Hanover House®

**“CONNOISSEUR”
COLLECTION**

**An 18th Century Revival
of Classic Beauty!**

“Connoisseur” is for the Individualist
with an appreciation and love of
history.

Computer to Save Millions In Film Editing Due Soon

By JACK GOULD

A major technological advance in Hollywood's methods of producing films and tapes for television and motion pictures is only weeks away with the commercial introduction of an electronic computerized system for editing visual material.

Savings of millions of dollars are envisioned in the system, which can store scenes of a drama photographed in seemingly chaotic disorder. Upon demand, the system produces a finished product in the logical narrative sequence of a director's choice.

The human hand never touches either the tapes or film during the editing, and the individual in creative control can choose between limitless versions of a given scene, repeat-

edly trying first one and then another and making deletions or insertions until he is esthetically satisfied.

The process, for which orders have already been accepted and may be in initial use by early summer, involves a sophisticated fusion of tape recorders,

Continued on Page 68, Column 3
